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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/509,764	09/30/2004	Michiharu Tanaka	Q83867	1057
65565	7590	09/20/2007		
SUGHRUE-265550			EXAMINER	
2100 PENNSYLVANIA AVE. NW			PECHE, JORGE O	
WASHINGTON, DC 20037-3213				
			ART UNIT	PAPER NUMBER
			3661	
			MAIL DATE	DELIVERY MODE
			09/20/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/509,764

Applicant(s)

TANAKA ET AL.

Examiner

Jorge O. Peche

Art Unit

3661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09/30/2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☒ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 09/30/2004 and 04/09/2007.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The terms "logical sum," "status signal," and "logical product" in claims 3 respectively are a relative terms, which renders the claim indefinite. The above terms are not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Applicant should disclose "logical sum," "status signal," and "logical product" to clearly set fourth the definition explicitly and with reasonable clarity, deliberateness and precision (see page 5; line 15 – page 6, line 10). The claims must have clear support so the meanings of the term in the claims are ascertainable to one skilled in the art by reference to the rest of the specification

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims **1-2** are rejected under 35 U.S.C. 102(b) as being unpatentable over **Ziegler et al. (Patent No.: US 6,778,867 B1)**.

Regarding **claim 1**, Ziegler discloses a monitoring and control of a handling device (robot) that is arranged in a protective device. The apparatus comprises:

- A plurality of CAN –controllers (pendants) held by two micro-processors (58 and 60) (logical operator)(see abstract, col. 8, lines 17-58; col. 9 line 36 – col. 10 line 38; Figures 1-4).
- The CAN-controllers send signal for controlling a robot (12) (see abstract, col. 7 line 58 - col. 8, line 58; col. 9 line 36 – col. 10 lines 38, Figures 1-4).

Regarding **claim 2**, Ziegler discloses a micro-computer (60) (main operator) and a micro-computer (58) (subordinate operator) for operating a robot (12) comprising:

- A plurality of CAN-controllers (enabling switch) (see col. 9 line 36 – col. 10 lines 38, Figures 1-4).
- A micro-computer (60) (main operator) and a micro-computer (58) (subordinate operator) connected to the CAN-controllers to control the power supply to the robot (12) (see col. 8, lines 17-58; col. 9 line 36 – col. 10 line 38; Figures 1-4).

Art Unit: 3661

- A micro-computer (60) (main operator) contains a high-ranking switch (col. 8, lines 47-58; col. 9 lines 60-8; Figures 2-4).
- A micro-computer (58) (subordinate operator) contains protective door switches (20 and 22)(col. 8, lines 8-58; Figures 2-4).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3 is rejected under 35 U.S.C. 103(a) as being unpatentable **Ziegler et al.**
(Patent No.: US 6,778,867 B1).

This rejection is presented in the best understanding of the claim limitations and in light of the specification.

Regarding **claim 3**, Ziegler discloses a micro-computer (60) (main operator) and a micro-computer (58) (subordinate operator) for operating a robot (12) comprising:

- A plurality of CAN-controllers (enabling switch) (see col. 9 line 36 – col. 10 lines 38, Figures 1-4).
- A safety controller (38) for determining the operation of the micro-computer (58) (subordinate operator) (switch is effective) that contains protective door switches (20 and 22)(col. 8, lines 8-58; Figures 2-4).

- A micro-computer (60) (main operator) contains a high-ranking switch (col. 8, lines 47-58; col. 9 lines 60-8; Figures 2-4).
- A micro-computer (58) (subordinate operator) contains protective door switches (20 and 22)(col. 8, lines 8-58; Figures 2-4).

However, Ziegler's invention fails to disclose wherein the servo power supply is put in an ON state, when a logical sum is obtained of a status signal which becomes 0 when the subordinate enabling switch is opened and 1 when the subordinate enabling switch is closed and a status signal which becomes 0 when the detection switch is opened and 1 when the detection switch is closed, and a logical product becomes 1 of the logical sum and a status signal which becomes 0 when the main enabling switch is opened and 1 when the main enabling switch is closed.

However, Ziegler teaches a robot control system (34) to turn ON and OFF the actuators 24, 26, 28, and 30 in response to safety criteria. Under this process, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to understand that the logical sum and product of the micro-computers (58 and 60) would depend in its binary output result to activate the robot actuators. Therefore, a person of ordinary skill in the art, upon reading the reference, can assume under the standard representation of binary signal and open-close process, that the open and close positions of both micro-computers would output a binary 0 and 1 respectively (logic sum, status signal, and logical product) to activate or deactivate the actuators.

Doing so would enhance a robotic safety control system to turn ON or OFF the actuators in accordance to high-ranking mechanism and safety criteria.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jorge O. Peche whose telephone number is 571-270-1339. The examiner can normally be reached on 8:30 am - 5:30 pm Monday to Friday.

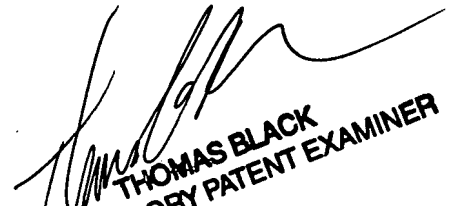
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas G. Black can be reached on 571-272-6956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Jorge O. Peche

Patent Examiner
Art Unit 3661
September 16, 2007



THOMAS BLACK
SUPERVISORY PATENT EXAMINER